



DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
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IN REPLY REFER TO:

COMNAVREGSWINST 4855.1A
N42WR2

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COMNAVREGSW INSTRUCTION 4855.1A

Subj: ORDNANCE QUALITY ASSURANCE PROGRAM REQUIREMENTS FOR WEAPONS STATIONS, AIR STATIONS, AND OTHER SHORE ACTIVITIES

Ref: (a) NAVSEA OP 5, Volume 1
(b) NAVSUP P-805, Ammunition Sentencing Publication
(c) OPNAVINST 4790.2J, Naval Aviation Maintenance Program (NAMP)
(d) MD 57489, STANDARD Missile Quality Assurance Program Requirements for Weapons Stations and Shore Activities
(e) Quality Program for Lightweight Torpedo/Rextorp Fleet Maintenance Activities (SL855-AB-PMM-010)
(f) NOSSAINST 8023.11A, Standard Operating Procedures (SOPs)
(g) COMFLTFORCOMINST 8023.5C, Conventional Ordnance/Explosives Handling Qualification And Certification Program

Encl: (1) Commander, Navy Region Southwest (CNRSW) Ordnance Program Quality Assurance Requirements for Naval Weapons Stations, Naval Air Stations and Other Shore Activities
(2) Standardized SOP Numbering and Subject Codes List

1. Purpose. To provide guidance and direction for implementing and maintaining a quality assurance program for expendable ordnance, weapons systems, and related products and services, at Navy Region Southwest (CNRSW) Ordnance Program activities.

2. Cancellation. COMNAVREGSWINST 4855.1

3. Background. This instruction has been updated per references (a) through (g) to reflect quality, storage, personnel qualification and certification, and other related Ammunition And Explosives requirements changes. Reference (a) provides explosives safety information and regulations regarding conventional ammunition, ammunition components, explosives, and related hazardous material operations at all Department of the Navy (DON) activities. Reference (b) provides general requirements and specific sentencing criteria applicable to receipt, segregation, storage, and issue processes at Navy, Marine Corps, and Coast Guard ammunition support activities (ashore). This publication is an extension of NAVSUP Publication 724 (P-724) in that it provides a framework for procedures for identifying ammunition serviceability and for reporting and tracking that serviceability through Conventional Ammunition Integrated Management

System (CAIMS) and the Marine Corps Ammunition Accounting and Reporting System II (MAARS II). Reference (c) is the Naval Aviation Maintenance Program (NAMP), which issues maintenance policies, procedures, and responsibilities for the conduct of NAMP at all levels of maintenance throughout naval aviation. References (d) and (e) provide quality assurance requirements for STANDARD Missile, and Lightweight Torpedo/Rextorp systems, respectively. Reference (f) provides Navy/Marine Corps policy, responsibility, and procedure for developing, implementing, and maintaining Standard Operating Procedures (SOPs) for operations involving Ammunition and Explosives (A&E) and Material Potentially Presenting an Explosives Hazards (MPPEH). Reference (g) provides guidance and direction for implementing and maintaining a standard Qualification/Certification (Qual/Cert) Program for all military, civilian and contractor ammunition handlers. Enclosure (1) delineates the minimum requirements of a quality assurance program for activities under CNRSW Ordnance Program. Enclosure (2) details the standardized SOP numbering and subject codes being implemented. This enclosure outlines a general listing of Ammunition and Explosives (A&E) and components of the All-Up-Round (AUR) and is designed for the uniform numbering and classification of A&E subjects for SOPs.

4. Scope. This instruction is applicable to all CNRSW Ordnance Program activities that receive, segregate, maintain, store, and issue Arms, Ammunition, And Explosives (AA&E) material, and AA&E components that make up the AUR.

5. Policy. CNRSW Ordnance Program activities will ensure that the quality assurance procedures as outlined in enclosure (1) are developed and implemented. Enclosure (2) shall be implemented into all newly developed SOPs generated after the date of this instruction. Assistance in development or implementation of quality assurance program requirements, or the uniform classification of SOPs, may be requested from CNRSW Ordnance Program Management Support Office, Ordnance Program Quality Assurance (QA) focal point (N42WR2).

6. Action

a. CNRSW Ordnance Installation Program Directors

(1) Ensure the requirements of enclosures (1) and (2) are implemented at all activities.

(2) Appoint in writing an individual to act as the local activity QA focal point to oversee the QA Program and interface with CNRSW QA focal point, and other applicable organization(s) personnel, e.g., Activity/CNRSW Explosives Safety Officer, Environmental, Security, etc.

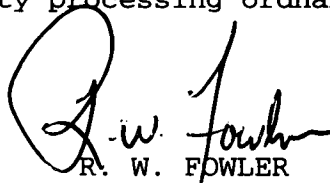
(3) Ensure continual monitoring and review of QA Program.

b. CNRSW Ordnance Program Support Office (N42WR)

(1) Act as CNRSW QA focal point.

(2) Provide assistance to activities in implementing the requirements of enclosures (1) and (2).

(3) Assess periodically the implementation status of the QA Program at each CNRSW activity processing ordnance and related material.



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**COMMANDER, NAVY REGION SOUTHWEST (CNRSW)
ORDNANCE PROGRAM QUALITY ASSURANCE REQUIREMENTS
FOR NAVAL WEAPONS STATIONS, NAVAL AIR STATIONS,
AND OTHER SHORE ACTIVITIES**

1.0 SCOPE AND INTRODUCTION.

1.1 Scope

a. This document provides the minimum requirements of a QA program for activities under CNRSW Ordnance Program. The intent of this document is to describe the overall planned and systematic actions necessary to provide assurance to the program and site managers that ordnance delivered to the Fleet conforms to the specified requirements and will perform as designed in service. Detailed technical quality requirements pertaining to specific ordnance systems are to be found in the applicable ordnance systems documentation.

b. These requirements are to be implemented at all activities within CNRSW where ordnance is processed. Each activity will prepare a specific instruction that describes how these requirements are implemented locally and giving organizational responsibility for action.

1.2 Introduction

a. The quality program requirements described by this document have been proven over time in both private industry and in government agencies. They provide assurance of quality and have been delineated in various quality documents, including MIL-Q 9858 and the International Standard (ISO) 9000 series. This document is patterned in methodology after the International Standard ISO 9000 series.

b. This document was prepared by CNRSW Ordnance Program Support Office (N42WR2). Comments or requests for revision should be addressed to: Commander, Navy Region Southwest, Ordnance Program (N42WR2) (Quality Assurance Focal Point), Naval Weapons Station Seal Beach, 800 Seal Beach Blvd., Seal Beach CA 90740-5000.

2.0 DEFINITIONS. Following is a short list of terms and definitions pertinent to this document:

Attribute: A characteristic or property which is appraised in terms of whether it does or does not exist with respect to a given requirement. Attributes and characteristics (See definition below.) define the technical requirements of quality for a weapon.

Enclosure (1)

Calibration: Comparison of two instruments or measuring devices, one of which is a standard of known accuracy traceable to national standards.

Characteristic: A physical, chemical, visual, functional, or any other identifiable property of a product of material. Characteristics and attributes define technical requirements of quality for a weapon.

Classification of Defects: The categorization of non-conformances of a product that are rated according to their seriousness. (See **Critical**, **Major**, and **Minor Defect** definitions below.)

Critical Defect: A defect classification of a product that is likely to result in hazardous or unsafe conditions for individuals using, maintaining, or depending upon the product or would prevent the performance of the tactical function of a major end item, such as an aircraft, weapons system, or ship.

Defect: Any non-conformance of a characteristic to the specified requirements.

In-Service Engineering Agent (ISEA): The governmental agency tasked with deciding technical issues for a given weapons system.

Inspection: The examination and testing of products including materials, components, and intermediate assemblies to determine if they conform to specified requirements.

Inspection Indicator: A mark or notation, usually from a stamp in the ordnance community, affixed by an authorized individual to documents or tags associated with an item denoting the status of the results of an inspection process. The indicator is traceable to the individual performing the inspection and is frequently linked with an inspection date.

Major Defect: A defect other than critical that is likely to result in failure or reduction of the usability of the product for its intended purpose.

Material Review Board: A committee comprised of individuals authorized to review, evaluate, and determine disposition of specific non-conforming items.

Minor Defect: A defect that is not likely to reduce substantially the usability of the product for its intended purpose.

Non-conformance: The failure of an item to conform to the specified requirements for any quality characteristic or attribute.

Quality: The conformance of all of the attributes and characteristics of an item to its specified requirements, including performance in service.

Quality Assurance: A planned and systematic pattern of all actions necessary to provide adequate confidence that the item or product conforms to the established technical requirements.

Quality Assurance Focal Point: The organization or individual assigned responsibility for oversight of quality assurance.

Testing: An element of inspection and refers to determination of the technical conformance of an item, usually by means of mechanical and/ or electronic equipment, usually TAMS (See **TAMS** definition below.), and according to prescribed procedures.

Test and Monitoring System (TAMS): TAMS refers to equipment, including support equipment, used for monitoring or testing of all types of weapons systems and equipment. It refers to all devices used to measure, calibrate, gage, test, inspect, diagnose, or otherwise examine materials, supplies and equipment to determine compliance with specifications.

3.0 MANAGEMENT RESPONSIBILITY.

3.1. **Quality Policy.** The quality policy of CNRSW is imbedded in and best expressed by the Ordnance Program QA mission and vision statements:

a. **Mission.** To become the premier Weapons QA Program in the Pacific Fleet, Commander Navy Region Southwest and throughout the Department of the Navy. The hallmark of this vision must be total customer satisfaction. This can only be achieved by offering technical experts and resources of consistent quality to exceed the expectations of our customers. As QA technical specialists, we work together creating an environment that promotes a total "Team" concept to help CNRSW Ordnance activities meet mission and operational requirements, achieve program success, and to safeguard personnel, assets, public welfare, and the environment while maintaining optimal levels of mission capability.

b. **Vision.** To provide superior management direction, technical assistance, and consultative services regarding Ordnance Program quality issues. To evaluate and review routine and critical processes, and to plan, develop, and coordinate programs of substantial scale and impact concerning all aspects of quality control and productivity improvement at all CNRSW Ordnance Program activities.

3.2 Organization. Individual activities shall develop specific instructions that direct various organizational elements of the activity to implement the quality assurance program requirements of this document. These instructions will become the activity quality assurance requirements manuals. The responsibility and authority of personnel who manage, perform, and verify work affecting quality shall be clearly defined and documented in the individual ordnance activity quality assurance manual. In an associated but separate document, personnel certified and assigned responsibility for quality assurance responsibility will be listed along with their certifications and any associated inspection indicators. Personnel involved in weapons processing will have the training and authority to perform the following:

- a. Initiate action to prevent occurrence of any product or process non-conformance;
- b. Identify and record product or process problems;
- c. Initiate, recommend, or provide solutions to product or process problems;
- d. Verify/validate solutions to product or process problems;
- e. Control further processing, delivery, or installation of non-conforming product until the deficiency or problem with the product or process has been effectively corrected and the solution verified/validated.

3.3 Resources. CNRSW Ordnance Program activities will provide adequate resources in the way of trained personnel, equipment and facilities for the management, performance of work, and verification activities, including support of internal and external audits.

3.4 Quality Assurance Focal Points. CNRSW Ordnance Program QA focal point has the responsibility for overseeing the quality program including maintenance of this document. The focal point will report on the performance of the quality system to Ordnance management on a periodic basis. In addition, the focal point will conduct periodic and documented audits of Ordnance activities to assess the success of implementation of a quality program and as a basis for improvement of the quality system. Currently, this responsibility is assigned to the CNRSW Ordnance Program Support Office (N42WR2). Each Ordnance activity within CNRSW will appoint a QA focal point for local oversight of the quality program.

4.0 QUALITY PLANNING. Each Ordnance activity shall document in their QA manual the methodology by which requirements of the regional QA program will be implemented and the organizational components assigned responsibility for accomplishment.

In addition, the QA manual will address the following planning considerations as appropriate:

a. Specific weapons systems quality plans. This could take the form of references to the appropriate documentation for each weapon system, such as technical manuals, drawings or SOPs.

b. Identification of any controls, special processes, equipment, such as TAMS, Ordnance Handling Equipment, facilities, or certification or special skills required to achieve the required quality.

c. Compatibility of control mechanisms, such as processes, facilities, and equipment.

d. Configuration management details of process and verification procedures, tests, documentation, and computer software.

e. Identification of quality verification points for inspections or tests. This could be accomplished by use of shop travelers, or other documentation that provides for referenced hold points in the weapons processing and a place for the applicable inspection indicator. The shop traveler will accompany the weapons throughout all stages of its processing and carry the unique serial number of that weapon. Similar items may be processed as a group using one shop traveler, as appropriate, and approved by the cognizant ISEA.

f. Identification of quality records and retention requirements.

5.0 DOCUMENT CONTROL.

5.1 General. Control of technical documentation shall be provided by a single centralized documentation control system, or designated individual(s) that ensures the systematic and timely distribution of accurate, complete, and current documentation.

5.2 Documentation Change Control. The established system or designated individual(s) responsible for maintaining technical documentation to the latest revision and change shall:

a. Assure controlled, timely distribution and recall of documents and changes, when required;

b. Prohibit the use of obsolete documents, documents containing unauthorized changes, and changes not identifiable to originating individual or group; and

c. Assure availability and use of properly updated documentation by authorized personnel.

5.3 Initial Review. All technical documentation shall be initially reviewed by the activity ordnance program QA focal point(s), and production representatives assigned QA responsibility to assure that all quality requirements are specified, clearly defined, and understood by all affected organizations. Work instructions and any subsequent changes shall be reviewed to assure that the methods and procedures adequately cover all QA requirements and allow for maintaining process control, as well as inspection requirements. In the event any pertinent requirements are missing from work authorizing documents, are unclear, or, for any other reason, are not fully understood, the activity shall promptly notify the issuing activity in writing, using normal communication channels, reporting such items for correction or clarification. Technical documentation inadequacies shall be coordinated with cognizant ISEA.

6.0 CONTROL OF CUSTOMER-SUPPLIED PRODUCT. Local procedures will be developed as necessary to manage and control customer supplied material such as ordnance supplied by an air squadron or ordnance material placed in temporary storage for a ship at a weapons station.

7.0 PRODUCT IDENTIFICATION AND TRACEABILITY

a. Weapons, component parts, and materials shall be controlled during all phases of operations and storage to provide confidence that only acceptable parts and materials are used; to prevent deterioration, damage, degradation; unauthorized issue; and to ensure that appropriate protective measures are applied.

b. Objective evidence of inspection and tests, status shall be provided following a documented and controlled procedure for inspection indication. Material held in storage shall be properly identified, segregated, controlled, and protected.

c. The methods for accomplishing this will be through the use of various methods such as Material Condition Tags/Labels and barcode labels as specified in Appendix A of NAVSEA TW010-AC-ORD-010 (NAVSUP P-805/P-807) (series) or documents such as shop travelers for items undergoing maintenance processing such as missiles. The local quality assurance manual or other instructions will specify the method to be used for each weapons system.

8.0 PROCESS CONTROL. Each Ordnance activity shall identify, plan, and document the production, installation, and work processes that affect quality and shall ensure these processes are conducted under controlled conditions, which shall include:

a. Documented validated procedures, i.e., SOPs, STANDARD Missile Processing Documents (SMPDs), etc., to conduct operations involving

A&E and MPPEH in the safest manner possible, defining all hazards associated with production, installation, and process.

b. Use of approved and certified equipment, such as hoists, slings, and environment controls, including considerations such as temperature and humidity where appropriate.

c. Compliance with referenced standards/codes, quality plans, and/or other procedures.

d. Monitoring and control of process parameters and product characteristics including, but not limited to, test and inspection results, configuration management, disposition of non-conforming material, and certification of personnel.

e. Approval of processes and equipment by means of formal process validation to include an on-site walk-through by all applicable parties or personnel, e.g., Explosives Safety, Public Works, Environmental, ISEA, and site operation personnel.

f. Criteria for workmanship, (e.g., written standards, representative samples, or illustrations).

g. Maintenance of equipment and facilities to ensure continuing process capability.

h. Handling of Electro-Static Discharge (ESD) sensitive material shall be in accordance with the requirements of EIA-625 (or MIL-STD-1686). Procedures for implementing and complying with these requirements, if applicable, shall be documented in local procedures.

i. Calibration of tools and test equipment, including an effective recall system of TAMS.

j. Documented training and certification of personnel.

9.0 INSPECTION AND TESTING.

9.1 General. Ordnance activities shall establish and maintain documented procedures for inspection to verify that specified requirements are met. Only personnel who have been properly trained shall perform inspection following documented criteria.

9.2 Receipt Inspection

a. All material shall be inspected upon receipt to verify correct identity, quantity, and general condition as shipped.

b. Age sensitive material that is subject to degradation in quality characteristics affecting safety, security and/or readiness for issue shall be inspected upon receipt to identify any degraded quality, assign correct material condition and status, and direct subsequent processing requirements.

9.3 In-Process Inspection.

a. In-process inspection shall be performed to detect product, material, process, equipment, or workmanship defects as early as possible, and to initiate immediate action to correct any processing deficiencies detected.

b. In-process inspection verification points will be assigned for various levels of criticality. Typical methods of accomplishing this are by means of the shop traveler or automated processing software. Personnel actually performing the work will verify those points at the lowest level of criticality with higher levels reserved for independent verification.

9.4 Final Inspection and Acceptance Testing.

a. All final inspections and tests shall be conducted in accordance with specific weapons program processing instructions, locally approved documentation or other work authorization documents to demonstrate and verify conformance with specified requirements. The activity shall prepare and maintain procedures and instructions for those inspections and tests, which are not specifically documented in specific weapons program processing documents.

b. The results of all inspections and tests performed shall be recorded and reported, as appropriate, for use in product, service, process, and Quality System improvement efforts.

c. No product shall be delivered until all activities specified in the documented procedures have been satisfactorily completed. The associated data and documentation must be available and verified. Final acceptance shall include authentication by an approved final acceptance stamp.

d. When certification of special test equipment is required by the work authorization document, the activity shall arrange to implement the applicable provisions of the certification prior to use.

9.5 Inspection and Test Records. Each activity shall maintain records of inspection and test results in accordance with specific weapons systems requirements.

9.6 Inspection Indicators.

a. Inspection status shall be indicated by the use of inspection indication stamps and/or authorized and documented signatures. Stamps and/or signatures shall be clear, readily recognizable, and controlled or documented with respect to authorization and conditions for use. Flexibility of stamp markings will be allowed for local Ordnance activity needs, but will carry a unique serial number traceable to the individual holding the stamp, as well as the activity identification by means of the Unit Identification Code (UIC).

b. Records shall be maintained which identify individuals with specific inspection stamps. When an individual vacates an inspection position, the stamps will be placed in secure bond for a minimum period of three months before being issued to another individual. All stamps that are not issued will be held in a secure place to prevent unauthorized usage. Additional required management, use, and authorization information on inspection indicators may be found in Appendix A of NAVSUP P-805.

9.7 Control of Inspection, Measuring and Test Equipment.

a. The activity shall identify test and inspection equipment used for product conformance verification and final acceptance. Test systems shall be certified and the certification posted in the testing area. Any unapproved changes to test systems shall void the certification. Test system alignment and calibration out-of-tolerance conditions shall be assessed for impact to the weapons being tested in coordination with ISEA.

b. All test system events (calibration, corrective action and preventive maintenance, certification, hardware and software changes, problems, failure modes, etc.) shall be recorded in a systems log.

9.8 Calibration of TAMS. All tools and test equipment requiring calibration will be managed in compliance with NAVSEAINST 4734.01B (METCAL), OPNAVINST 3960.16 (TAMS), and OP43P6B (MEASURE). For those activities that perform maintenance on Armament Weapons Support Equipment (AWSE), all the requirements of NAVAIRINST 13640.1B and OPNAVINST 4790.2J Section 19 shall apply. The calibration program will demonstrate:

a. An effective recall system where all TAMS requiring calibration will be listed on the METCAL Program format 310 and 350 reports as applicable or their equivalent if calibration is performed by a private calibration facility. Newly procured items are inducted into the system prior to use and obsolete or items that cannot be

repaired are removed from the calibration cycle and disposed of in accordance with DOD procedures.

b. Calibration status of TAMS by use of standard calibration labels showing calibration status, when last calibrated, by what activity, when the next calibration is due, and any special conditions of use. Items that are not required for production use, but desired to be retained for future use, shall be designated as "inactive."

c. Calibration by a certified calibration laboratory using standards traceable to the National Bureau of Standards and using approved and current calibration procedures by certified personnel.

10.0 CONTROL OF NON-CONFORMING MATERIAL.

10.1 General. Non-conforming material shall be identified, controlled, and reported as required to effect corrective, preventive, and improvement action. Non-conforming material shall not be accepted for use except as authorized under formal and approved procedures.

10.2 Identification and Segregation. Items that deviate from drawings, specifications, other specified requirements, or expected conditions shall be identified as non-conforming, and segregated from conforming items. In the event that segregation is not feasible, items shall be clearly identified as non-conforming to preclude unauthorized use or continued processing.

10.3 Disposition. Designated personnel, such as a Material Review Board (MRB), shall review and analyze each non-conformance to determine the cause of non-conformance, classify it as to importance, and specify disposition. Findings, recommendations, and disposition actions should be recorded on non-conformance documentation. Documentation may include formal Supply Discrepancy Reports (SDRs), memos, or e-mails. Classifications of disposition are as follows:

- (1) Remove from Use
- (2) Return for Rework
- (3) Repair to Standard Repair Procedure
- (4) Return to Contractor
- (5) Use As Is

10.4 Non-conformance Reporting. Each non-conformance shall be reported utilizing a defined format and procedure. This procedure shall include provisions for material that requires special or expeditious handling or disposition to eliminate or minimize hazards to personnel or equipment and more serious material quality deterioration. Examples of these conditions are material involved in accidents or incidents, misfires or other reported malfunctions, heat,

shock, or moisture exposure. The initial non-conformance report shall be prepared using an internal (activity) format or procedure and processed for review and subsequent action. Following review and disposition of the non-conformance report, formal reporting per applicable policies may be required.

10.5 Corrective Action. A corrective action system shall be established and maintained by each Ordnance activity to:

- a. Notify the responsible organization of the need for corrective action.
- b. Assure that a reply by the responsible organization is received within a reasonable, prescribed time interval on the action taken, or to be taken, to correct existing deficiencies and to minimize or eliminate future occurrences.
- c. Determine the adequacy of the proposed corrective action.
- d. Conduct follow-up action to ensure corrective action is implemented and properly closed.
- e. Submit corrective action requests to higher levels of management in the event that either initial corrective action requests or follow-up actions have not accomplished satisfactory results.
- f. Non-conforming material supplied by activities or contractors external to the organization shall be reported via the procedures specified in SECNAVINST 4855.3A Product Quality Deficiency Reporting Program (PQDR).

10.6 Preventive Action. Mere disposition of non-conforming material is not sufficient. Analysis will be made of instances of non-conformance to determine the root cause and the action required preventing its reoccurrence. Industry studies have shown that over 80 percent of non-conformances are systemic or management controllable in nature. Typical actions that are preventive in nature include training of personnel, replacement of equipment, change in procedures, screening of supplied material, etc.

11.0 HANDLING, STORAGE, PACKAGING, PRESERVATION, AND DELIVERY.

11.1 General. Products, parts, and materials shall be controlled during all operations and storage to ensure that only acceptable parts and materials are used; to prevent deterioration, damage, degradation, or unauthorized issue; and to ensure that appropriate protection is applied. Material held in storage shall be properly segregated, controlled, and protected. First-In-First-Out issue shall be observed whenever possible.

11.2 Material Condition Identification and Segregation. Material condition tags/labels specified by NAVSUP P-805, Appendix A, shall be

used to indicate the inspection and condition status of all material, except material in process that has accompanying material condition status documentation. Unserviceable material shall be physically separated from serviceable material, pending disposition.

11.3 Storage Environmental Controls. Each activity storing material that is susceptible to environmental deterioration shall store such material in areas capable of providing an appropriate environment. Measuring equipment, such as temperature recording equipment used to monitor the environment of storage areas, shall be calibrated. Environmental indicators, such as humidity sensors, shall be stored with the material as required by the specific weapon system. Environmental indicators shall be examined periodically to verify that the environmental limitations have not been exceeded. When there is an indication that limits have been exceeded, the affected material shall be considered non-conforming, the documentation reporting the non-conformance shall be initiated, and the material condition code changed to "Suspended." Each activity shall maintain records of material in stores and the environmental controls that exist at each storage area. Monitoring through continuous recording or periodic measurements shall be recorded in a log.

11.4 Control of Age-Dated Material. Each activity shall maintain records of material subject to age deterioration. Age-dated material shall be marked using MIL-STD 129P, NAVSUP PUB 437 (Shelf Life Codes), and NAVSUP PUB 4105 (List of Items Requiring Special Handling (LIRSH)) as a guide to identify items with a non-extendable (Type I) storage period and items with a storage time which may be extended (Type II) after completion of prescribed inspection and/or restorative action.

11.5 Preparation for Shipment. Pre-shipment and pre-issue inspection shall be performed to prevent releasing unauthorized, unacceptable, or improperly identified material. Pre-shipment and pre-issue inspection shall be performed in accordance with approved inspection and test procedures using the applicable weapons documentation. Particular notice will be made of Notices of Ammunition Reclassification (NARS) as found in TWO24-AA-ORD-010 (NAVSUP P-801) (latest) "Ammunition-Unserviceable, Suspended and Limited Use."

11.6 Hazardous Material (HAZMAT).

a. Hazardous Material shall be controlled. Specific means for identification, segregation, storage, issue, use, and disposal shall be documented and maintained. Personnel shall be appropriately trained in the use and safeguard of such material.

b. Work authorizations and task assignments shall be reviewed to determine any special processes or handling procedures that may require HazMat considerations. These shall be included in work documents, e.g., SOPs, travelers, inspection instructions, etc.

12.0 CONTROL OF QUALITY RECORDS. Quality records (hard copy or electronic media) shall be legible and stored in such a way that they are readily retrievable in facilities that provide a suitable environment to prevent damage, deterioration, or loss. Records shall provide evidence that necessary inspections and tests were performed and shall be suitable in format, accuracy, and detail to permit analysis, as required, for initiation of specific corrective actions. Retention of records shall be for a period of seven years or in accordance with the specific weapons program.

13.0 INTERNAL PROGRAM EVALUATIONS/AUDITS.

13.1 General. Periodic internal audits shall be conducted to verify quality activity, determine the effectiveness of the quality system and to determine if results comply with the specified requirements.

13.2 Internal Evaluation Planning. A documented evaluation plan shall be prepared to assign responsibilities, establish schedules, and delineate procedures pertaining to the internal evaluation process. An evaluation plan and schedule shall be prepared and shall include, as a minimum:

- a. Verification of documentation availability and change control;
- b. Examination of operations and documentation in the processing areas;
- c. Determination of personnel familiarity and compliance with required documents;
- d. Verification of personnel training and certification per COMFLTFORCOMINST 8023.5 (latest);
- e. Verification of test and inspection equipment maintenance and calibration; and
- f. Verification of facility and safety requirements.

13.3 Scheduling. Internal evaluations shall be conducted as either a comprehensive annual evaluation, or partially at intervals, with all areas being addressed at least once during any consecutive 12-month period. Internal evaluations shall cover all shifts and be conducted according to an evaluation schedule that is updated annually. In the event that internal/external non-conformances or customer complaints occur, planned evaluation frequency of affected areas shall be appropriately increased.

13.4 Team Composition. Management or other qualified personnel not having direct responsibilities in the areas to be evaluated shall perform these program evaluations. Evaluation personnel shall be thoroughly familiar with the applicable requirements, procedures, and standards for the program elements being evaluated.

13.5 Reporting of Program Evaluation and Corrective Actions.

a. Results of each evaluation shall be documented in a formal report with appropriate recommendations for corrective action and provided to affected managers and supervisors and, when specifically requested, to the Regional Ordnance Quality Assurance Focal Point or the specific weapons program office. Discrepancies cited during program evaluations shall be recorded and analyzed for root cause. Evaluation reports shall include, as a minimum:

- (1) Time period allocated for correction of deficiencies;
- (2) Identification of individual or group responsible for corrective action; and
- (3) Status of corrective action progress.

b. Follow-up evaluations shall be conducted to assure that corrective and improvement actions are timely and effective for each deficiency. Closeout of deficiencies by responsible organizations shall be recorded and reported.

14.0 TRAINING.

14.1 General. The activity shall identify training needs to ensure that all personnel are properly trained and possess both technical and administrative knowledge, skills, and work guidance necessary to perform assigned tasks. Training programs shall include sufficient formal training to ensure personnel proficiency, including means to measure that proficiency. Training needs shall be periodically assessed to determine requirements for additional training. The activity shall determine and develop or approve criteria for training programs. Physical and visual examinations shall be given to production and inspection personnel on a periodic basis. Appropriate records of training shall be maintained.

14.2 Certification. Management shall identify operations/processes that require specialized skills. Personnel shall be trained, tested, and certified before performing these functions. Certification records shall be maintained.

14.3 Explosives Safety Training Program. All personnel involved in technical processing will be certified to work with explosives associated with the applicable weapons program. Department of the Navy explosives safety training requirements are defined in reference (a).

15.0 STATISTICAL TECHNIQUES. Each activity will gather, display, and analyze data, as required, to provide adequate control of processing of weapons systems. Typical metrics for weapons processes include customer satisfaction survey results, production totals, and

information on non-conforming material, costs associated with non-conforming material, etc. Display and analysis of data will be by simple statistical methods such as bar and line charts, Pareto Analysis, fishbone diagrams, or other means including control charts as directed by management. Analysis results will enable the following:

- a. Detection of causes of deficiencies from handling, refurbishment, alteration, repair, modification, test, calibration, inspection, etc.
- b. Corrective and preventive action feedback to various phases of the processing/repair cycle. (This shall include feedback to external organizations when appropriate.)
- c. Determination of the need for specific or special personnel training.

STANDARDIZED SOP NUMBERING AND SUBJECT CODES LIST

Explanation of the three elements of the SOP serial number designator is as follows:

Subject Code:	Date Sequence:	Activity:
(Alpha/Numeric)	(Numeric)	(Alpha)

Serial number position: A00 0105 NASF

A general listing of subject codes are listed in the pages of this enclosure, i.e., the subject code designator (alpha-numeric-numeric) "A00" is for "Bombs, Components, and Countermeasures, General." Note: This listing represents the major subject code and general listings of that code. A more complete listing which contains "sub-component" codes can be obtained from CNRSW Ordnance QA Program (N42WR2). The date sequence is represented by a four digit numeric designator. The first two digits represent the number of SOPs written for the particular subject code, i.e., "01" represents the first SOP for this particular weapon, component, or process). This designator changes only when the SOP undergoes a major process, or technical change. The second set of digits represent the year the SOP is written, i.e., "05" represents the year 2005. The example above shows that this is the first SOP for the particular subject written in the year 2005. The completed SOP serial number would read as follows: "SOP A00-0105-NASF."

Activity codes are represented as follows:

<u>Activity</u>	<u>Activity Code</u>
NAVWPNSTA Seal Beach	SB
NAVWPNSTA Seal Beach Detachment Fallbrook	FB
NAVWPNSTA Seal Beach Detachment San Diego	SD
NB Coronado	NBC
NB Ventura County	NBVC
NAS Lemoore	NASL
NAF El Centro	NAFEC
NAS Fallon	NASF
NAWS China Lake	NAWSCL

Note: The following acronyms are used: NAVWPNSTA (Naval Weapons Station), NAS (Naval Air Station), NAF (Naval Air Facility), NB (Naval Base), and NAWS (Naval Air Weapons Station).

GENERAL LISTING OF SOP COMPONENT SUBJECT CODES

A - - Bombs, Components and Countermeasures
 A 0 0 Bombs, components and countermeasures, general
 A 1 0 Bombs, general purpose and fragmentation, general
 A 2 0 Bombs, special purpose, general
 A 3 0 Cluster bomb units (aircraft dispenser and bombs)
 A 4 0 Bombs, practice, general
 A 5 0 Bomb component, general
 A 6 0 Aircraft bomb dispensers, general
 A 7 0 Countermeasures, general

B - - Military Pyrotechnics
 B 0 0 Military pyrotechnics, general
 B 1 0 Flares, general
 B 2 0 Markers, general
 B 3 0 Signals, general
 B 4 0 Components, general
 B 5 0 Pyrotechnic loads/compositions, general

C - - Military Chemicals
 C 0 0 Military chemicals, general
 C 1 0 Chemicals/biological agents, general
 C 2 0 Smoke pots/generators, generals

D - - Depth Charges and Underwater Sound Signals
 D 0 0 Depth charges and underwater sound signals, general
 D 1 0 Depth charges, general
 D 2 0 Depth charge components, general
 D 3 0 SUS (Signals, Underwater Sound), general
 D 4 0 SUS components, general

E - - Demolition Explosives and Material
 E 0 0 Demolition explosives and materials, general
 E 1 0 Charges, general
 E 3 0 Container, general

G - - Mines And Components
 G 0 0 Mines and components, general
 G 1 0 Mines, general
 G 2 0 Mine cases, general
 G 2 1 HBX loaded
 G 2 2 TNT loaded
 G 2 3 Inert loaded
 G 2 4 Empty
 G 5 0 Mine components, general
 G 8 0 Mine containers/crates, general

H - - Cartridge and Cartridge Actuated Devices
 H 0 0 Cartridge and cartridge actuated devices, general
 H 1 0 Cartridge, general
 H 3 0 Components, general

J - - Rockets and Components
 J 0 0 Rockets and components, general
 J 1 0 Rockets, general
 J 2 0 Rocket motors, general
 J 3 0 Rocket warheads, general
 J 4 0 Rocket launchers, general
 J 5 0 Launchers and rockets, general
 J 6 0 Rocket components, general

N - - Bulk Explosives and Propellants
 N 0 0 Bulk explosives and propellants, general
 N 1 0 Explosives, general
 N 2 0 Aluminized explosives, general
 N 3 0 RDX & RDX compositions, general
 N 4 0 Propellants, general
 N 5 0 Initiating explosives, general

O - - Miscellaneous Ammunition Components And Containers
 O 0 0 Miscellaneous ammunition, components and containers, general
 O 1 0 Miscellaneous ammunition components, general
 O 2 0 Miscellaneous containers, general
 O 3 0 Material handling equipment, general
 O 4 0 Dunnage/scrap/waste, general
 O 5 0 Ammunition handling, general
 O 6 0 Test equipment, general
 O 7 0 Guns and gun components, general

P - - Small Arms and Grenades
 P 0 0 Small arms and grenades, general
 P 1 0 Cartridges/shells (.410 gauge - 10 gauge), general
 P 2 0 Cartridges, general (.22 - .50 caliber)
 P 3 0 Cartridges, general (5.56MM - 9MM)
 P 4 0 Grenades and components, general

Q - - Gun Ammunition 20MM to 4 Inch
 Q 0 0 Gun ammunition 20MM to 4 Inch, general
 Q 1 0 Cartridge/mortars, general
 Q 2 0 Projectiles, general
 Q 3 0 Cartridge cases/propelling charges, general

- - Gun Ammunition Over 4 Inch
R
 R 0 0 Gun ammunition over 4 inch, general
 R 1 0 Projectiles, general
 R 3 0 Propelling & bag charges/cartridges & cases/mortars, general
 R 5 0 Fuzes, general
 R 6 0 Miscellaneous gun ammunition components, general

S - - Torpedoes And Components
 S 0 0 Torpedoes and components, general
 S 1 0 Torpedoes, general
 S 2 0 Warheads, general
 S 3 0 Miscellaneous components, general
 S 4 0 Containers, general

T	-	-	Surface Launched Guided Missiles And Components
T	0	0	Surface launched guided missiles and components, general
T	3	0	Rocket motors/engines, general
T	4	0	Warheads, general
T	5	0	Miscellaneous components, general
T	6	0	Handling and support equipment, general
T	7	0	Containers, general
V	-	-	Air Launched Guided Missiles and Components
V	0	0	Air launched guided missiles and components, general
V	1	0	Missile rounds, general
V	2	0	Guidance and/or control group, general
V	3	0	Rocket motors/engines group, general
V	4	0	Warheads, general
V	5	0	Miscellaneous components, general
V	6	0	Handling and support equipment, general
V	7	0	Containers, general